

255/14427

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SEP 09 2002

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
7 March 2002 (07.03.2002)

PCT

(10) International Publication Number
WO 02/017988 A3(51) International Patent Classification⁷: **A61M 11/00**,
15/00, 16/00, 16/10, A62B 7/00, F16K 31/02(74) Agent: **DAVIDSON, Michael, S.**; Lyon & Lyon LLP, 633
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2066 (US).

(21) International Application Number: PCT/US01/25886

(81) Designated States (*national*): AU, CA.

(22) International Filing Date: 17 August 2001 (17.08.2001)

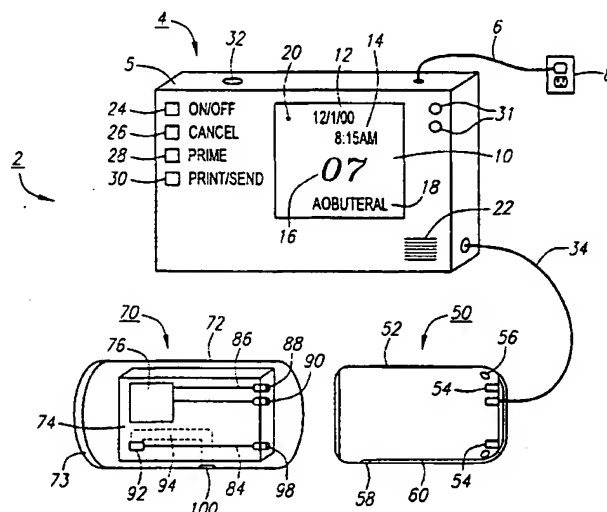
(25) Filing Language: English

(84) Designated States (*regional*): European patent (AT, BE,
CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC,
NL, PT, SE, TR).

(26) Publication Language: English

(30) Priority Data:
09/650,491 29 August 2000 (29.08.2000) USPublished:
— with international search report(71) Applicant: **SENSORMEDICS CORPORATION**
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92887-4645 (US).(88) Date of publication of the international search report:
29 August 2002(72) Inventor: **STENZLER, Alex**; 204-2 North Singingwood
Street, Orange, CA 92869 (US).For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: PULMONARY DRUG DELIVERY DEVICE



(57) Abstract: A nebulizer (2) for delivering a drug to a patient includes an electronic control unit (4); a hand piece (50) connected to the electronic control unit via a cable (34), and a cartridge (70) detachably engaged with the hand piece. The electronic control unit includes a controller, a cartridge reader, a dosage storage element, and a display (10). The display preferably displays the drug name (18) and the number of dosages remaining (16) in the cartridge. The cartridge includes a head or nebulizer element (100) for creating a fine mist or cloud of the drug in droplet form. The cartridge also includes a storage container (74) containing a drug and a pump (92) for pumping the drug to the nebulizer element. The cartridge also contains an information storage element (76) for containing information regarding the drug and the drug delivery protocol for the patient. The information in the information storage element is transmitted to the electronic control unit when the cartridge is engaged with the hand piece.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US01/25886

A. CLASSIFICATION OF SUBJECT MATTER		
IPC(7) :A61M 11/00, 15/00, 16/00, 16/10; A62B 7/00; F16K 31/02		
US CL :128/200.14, 200.16, 200.22, 203.12, 204.21, 204.23		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols)		
U.S. : 128/200.14, 200.16, 200.22, 203.12, 204.21, 204.23		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
NONE		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
NONE		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,363,842 A (MISHELEVICH ET AL.) 15 NOVEMBER 1994, SEE COL.6, LINES 30-45, 62-64.	1,5,6,8-18,20-24,27
Y	US 5,404,871 A (GOODMAN ET AL.) 11 APRIL 1995, SEE COL.16, LINES 4-23.	1,5,6,8-18,20-24,25,26,27,28-30
Y	US 4,984,158 A (HILLSMAN) 08 JANUARY 1991, SEE FIG.1.	1,5,6,8-18,20-24
Y	US 5,950,619 A (VAN DER LINDEN ET AL.) 14 SEPTEMBER 1999, SEE COL.3, LINES 10-25.	1,5,6,8-18,20-24,25,26,27,28-30
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
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"O"	document referring to an oral disclosure, use, exhibition or other means	
"P"	document published prior to the international filing date but later than the priority date claimed	
Date of the actual completion of the international search		Date of mailing of the international search report
01 DECEMBER 2001		31 MAY 2002
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231		Authorized officer
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US01/25886

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y <u>X</u>	US 5,392,768 A (JOHANSSON ET AL.) 28 FEBRUARY 1995, SEE COL. 25, LINES 36-48.	2-4,7,19 <u>31</u>